

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Eric O. Bodnar

Serial No.: Not yet assigned

Filed: Herewith

For: Data Processing Environment with
Methods Providing Contemporaneous
Synchronization of Two or More Clients

Examiner: Fleurantin, J.

Art Unit: 2172

PRELIMINARY AMENDMENT

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

Before examination of the subject application, please amend the application as shown below. This amendment is accompanied by separate sheets of paper that show marked-up versions of the text amended herein.

In the specification:

Please replace the paragraph in the Related Applications section, the paragraph beginning on page 1, at line 5, with the following paragraph:

The present application is a continuation of co-pending U.S. Application No. 09/136,212, filed August 18, 1998, which is related to and claims the benefit of priority from the following commonly-owned, formerly co-pending U.S. provisional patent applications: serial no. 60/069,731, filed December 16, 1997, and entitled DATA PROCESSING ENVIRONMENT WITH SYNCHRONIZATION METHODS EMPLOYING A UNIFICATION DATABASE; serial no. 60/094,972, filed July 31, 1998, and entitled SYSTEM AND METHODS FOR SYNCHRONIZING TWO OR MORE DATASETS; and serial no. 60/094,824, filed July 31, 1998, and entitled DATA PROCESS ENVIRONMENT WITH METHODS PROVIDING CONTEMPORANEOUS SYNCHRONIZATION OF TWO OR

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MORE CLIENTS. The disclosures of the foregoing provisional applications are hereby incorporated by reference in their entirety, including any appendices or attachments thereof, for all purposes. The present application is also related to the following co-pending, commonly-owned U.S. patent application, the disclosures of which are hereby incorporated by reference in their entirety, including any appendices or attachments thereof, for all purposes: serial no. 09/136,215 (Attorney Docket No. SF/0018.03), filed August 18, 1998, and entitled SYSTEM AND METHODS FOR SYNCHRONIZING TWO OR MORE DATASETS. The present application is also related to the following commonly-owned U.S. patent applications, the disclosures of which are hereby incorporated by reference in their entirety, including any appendices or attachments thereof, for all purposes: serial no. 08/609,983, filed February 29, 1996, and entitled SYSTEM AND METHODS FOR SCHEDULING AND TRACKING EVENTS ACROSS MULTIPLE TIME ZONES, now U.S. patent no. 5,845,257; serial no. 09/020,047, filed February 6, 1998, and entitled METHODS FOR MAPPING DATA FIELDS FROM ONE DATA SET TO ANOTHER IN A DATA PROCESSING ENVIRONMENT, now U.S. patent no. 6,216,131, and serial no. 08/923,612, filed September 4, 1997, and entitled SYSTEM AND METHODS FOR SYNCHRONIZING INFORMATION AMONG DISPARATE DATASETS.

In the claims:

Please cancel claims 8 and 21-40, as the substance of those claims are issuing as a patent in the parent of the present application. All remaining claims are shown below for the Examiner's convenience.

1. In a data processing environment, a method for synchronizing multiple data sets, the method comprising:

establishing a data repository for facilitating synchronization of user information maintained among multiple data sets, said data repository storing user information from the data sets;

storing at least one mapping which specifies how user information may be transformed for storage at a given data set;

receiving a request for synchronizing at least one data set;

based on user information stored at said at least one data set and based on said at least one mapping, propagating to the data repository from each of at said at least one data set any changes made to the user information, to the extent that such changes can be reconciled with user information already present at said data repository; and

based on user information stored at said data repository and based on said at least one mapping, propagating to each of said at least one data set any changes to the user information which have been propagated to the data repository, to the extent that such changes are not present at said each data set.

2. The method of claim 1, wherein said step of propagating to the data repository comprises:

performing selected operations of adding, updating, and deleting information at the data repository, so that the data repository reflects changes made to user information at the data sets.

3. The method of claim 2, wherein said operation of deleting information comprises a logical delete operation of marking information as having been deleted.

4. The method of claim 1, wherein said data repository stores user information that is a super-set of all user information stored at said multiple data sets.

5. The method of claim 1, wherein said data repository and said at least one mapping comprise a grand unification database, for facilitating synchronization among multiple data sets.

6. The method of claim 5, wherein one grand unification database is created for each type of user information which is to be synchronized.

7. The method of claim 6, wherein said environment includes types of user information selected from contact, calendar, and task-oriented information.

9. The method of claim 1, wherein each data set comprises a plurality of data records, and wherein each data record is represented within the data repository.

10. The method of claim 9, wherein each of said data records is represented within the data repository by a corresponding data record having a unique identifier.

11. The method of claim 1, wherein each mapping comprises a mapping table storing a plurality of mapping entries, each mapping entry storing at least a first identifier for indicating a particular data record in the data repository which the entry is associated with, and a second identifier for indicating a particular data record at a particular data set which is the source for the user information.

12. The method of claim 11, wherein each mapping table is associated with a particular data set.

13. The method of claim 11, wherein each mapping entry stores particular information useful for determining when its associated user information was last modified.

14. The method of claim 13, wherein said particular information comprises a last-modified time stamp, derived at least in part from the client device where the associated user information was last modified.

15. The method of claim 13, wherein said particular information comprises a checksum value, for use with a data set residing at a client device that does not support time stamps.

16. The method of claim 1, wherein said step of propagating to each of said at least one data set comprises:

performing selected operations of adding, updating, and deleting information at each of said at least one data set, so that said each reflects changes made to user information at other data sets.

17. The method of claim 16, wherein said operation of deleting information comprises physically deleting information at said each data set.

18. The method of claim 1, wherein at least one of the said data sets functions, at least in part, as said data repository.

19. The method of claim 1, wherein user information is stored at the data repository as unformatted blob data.

20. The method of claim 19, further comprising:
providing at least one type module for facilitating interpretation of user information stored as unformatted blob data at the data repository.

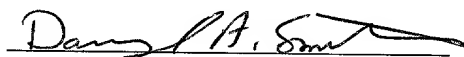
Remarks

This Preliminary Amendment is being filed in conjunction with an application filing that is a continuation of application serial number 09/136,212, filed August 18, 1998, which will issue as U.S. patent no. 6,275,831 on August 14, 2001. Claims 8 and 21-40 have been canceled.

If for any reason the Examiner feels that a telephone conference would in any way expedite prosecution of the subject application, the Examiner is invited to telephone the undersigned at (831) 461-5535.

Respectfully submitted,

Date: August 13, 2001



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Related Applications:

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